

# The Closed-Loop Scoop

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## Tenth annual solid waste status report available

*Ellen Caywood, Ecology Planner*

In 2000, more than five million tons of waste were disposed of, while the recycling rate rose to almost 35 percent. Litter collected from Washington roads and illegal dumps in 2001 topped 10 million pounds. This and other data related to solid waste can be found in *Solid Waste in Washington State - Tenth Annual Status Report*, Ecology Publication #01-07-047. The report, with supporting databases and summary tables, can be found at <http://www.ecy.wa.gov/programs/swfa/index.html>. A hard copy can be requested from the Department of Ecology's Publication Distribution Center, 360-407-7472. For questions contact Ellen Caywood, 360-407-6132 or [ecy461@ecy.wa.gov](mailto:ecy461@ecy.wa.gov).

## 2002 Scrap Plastics Marketing Directory now available

This comprehensive document provides extensive details for more than 300 major buyers and processors of recovered plastics in the U.S., Canada and Mexico. In addition to information about each company, the resins they handle and the form in which resins are desired, the directory presents indexes by company location and resins purchased. Produced by the publishers of *Resource Recycling* magazine and the *Plastics Recycling Update* newsletter, the resource document costs \$54 within the U.S. Credit card orders can be placed at 503-233-1305. For more information and a special internet price, go to <http://www.resource-recycling.com/plastics.html>.

## Statewide litter campaign Local government opportunities to be involved

*Megan Warfield, Ecology Litter Programs Coordinator*

The Department of Ecology (Ecology) is preparing to launch the first statewide litter prevention campaign in over 10 years later this spring. You may have heard about the campaign at regional meetings during 2001. Involvement by state agencies, businesses and local governments will help make the campaign a success. On the following page, you will find a list of the various campaign elements and opportunities for involvement. If you would like your organization to be on the list to receive a campaign packet (please limit one per office), or if you would like more specific information, please send contact information via email to Megan Warfield at [meth461@ecy.wa.gov](mailto:meth461@ecy.wa.gov). A Web site highlighting this information should be available by early April at [www.ecy.wa.gov/programs/swfa/litter](http://www.ecy.wa.gov/programs/swfa/litter).

The Department of Transportation has agreed to post new signs on interstates and state highways throughout the state in conjunction with the litter

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## Signs, *continued from page 1*

campaign. The blue, white and black sign features the campaign slogan, "Litter and it will hurt," and the new litter hotline phone number 1-866-LITTER – 1. We encourage local governments to post campaign signs on local roads and streets.

### Broadcast media

Ecology produced three television and three radio spots, all having a humorous focus on the stiff fines for littering. The spots introduce the Grand Inquisitor from the 15<sup>th</sup> century, and his henchman, who argue that litterers should be "punished." Media networks, Belo (TV) and Entercom (Radio), will broadcast the spots on their networks statewide. If you would like to coordinate getting the spots on local access television or radio, tapes can be provided with permission through Ecology.

Ecology has put forward a sum of money to be used to leverage sponsorship from businesses through cooperative media buys. Money put forth from an approved sponsor will be "matched" (at a set rate) by Ecology, thereby extending the amount of air time purchased. The sponsor gets to "tag" the spot with their corporate logo. If you are interested in becoming a sponsor, please contact Ecology.

### Print media

Designs for advertising slicks that can be included in newspapers or other publications are available. We encourage local governments to approach the local press to place the ads or to get coverage of the campaign or litter issue in general.

## Collateral materials

A variety of collateral material designs are also available for local governments to produce and distribute at offices and events such as:

- Car-size litterbags;
- Posters;
- Signs specifically designed for transfer stations or landfills;
- Bumper stickers and decals;
- A variety of other posters and signs.



***Grand Inquisitor***

### Internet

A campaign Web site is being developed. If you would like to include a link to the campaign Web site on your own Web page, please contact Ecology. Talking Web banners featuring the Grand Inquisitor are also available for inclusion on your own Web page.

### Enforcement

Ecology is partnering with Washington State Patrol to step up enforcement of littering. On designated days throughout the campaign, troopers will keep an eye out for litterers, and remind motorists that littering is against the law. County sheriff and local police departments are encouraged to participate in these "litter emphasis days."

## *Calendar of Events*

**March 11-12, 2002**, Ground Water Statistics Workshop, Dept. of Ecology, Lacey, WA. To register call Sally Safioles at 425-649-7089 or e-mail [ssaf461@ecy.wa.gov](mailto:ssaf461@ecy.wa.gov).

**April 3 to 5, 2002**, The EnvironDesign6 Conference will be held at the Seattle Conference Center in Seattle, WA. For more information, call 561-627- 561-683-9025 ext. 212, [LukeM@nrc-recycle.org](mailto:LukeM@nrc-recycle.org).

**April 22, 2002**, Earth Day. Here's a great Web site that can assist with your planning. <http://www.earthday.net>

**May 5 to 8, 2002**, Washington State Recycling Association's 22nd Annual Conference will be held at the Wenatchee Convention Center, Wenatchee, WA. Present your "cutting edge" work at Washington's premier recycling conference. Contact Agenda Committee Chair Jim Schrock, 509-534-1638 or [jschrock@cet.com](mailto:jschrock@cet.com), or Janet Nazy at WSRA, 206-244-0311 or [janetn@wsra](mailto:janetn@wsra).

**July 31, 2002**, President's Environmental Youth Awards Program Application Deadline for FY 2002 Awards.

**August 27 to 30, 2002**, The National Pesticide Stewardship Alliance Annual Conference will be held in downtown Seattle, WA. Contact Kathy Brooks at 202-550-0587 or [brooks@arrowchase.com](mailto:brooks@arrowchase.com). Information on the conference will be posted on the NPSA's Web site as it is available: [www.npsalliance.org](http://www.npsalliance.org).

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# Fostering sustainable behavior

Doug McKenzie-Mohr, Ph.D., *Environmental Psychologist*, [dmm@cbsm.com](mailto:dmm@cbsm.com)

One of the most difficult tasks faced by those who work to better the environment is changing public behavior. A Web site is now available to help with this task (<http://www.cbsm.com>). Briefly, this site includes the following features:

- An on-line guide to fostering sustainable behavior. This guide provides detailed information on how to design environmental programs to effectively change public behavior. This guide will be of particular use to those who design public programs to encourage such activities as waste reduction, water and energy efficiency, alternative transportation choices, etc.
- A searchable database of over 1,000 academic articles on fostering sustainable behavior.

- A discussion forum for sharing information and asking questions of others.
- A searchable database of graphical examples of social marketing as they have been applied to fostering sustainable behavior. You can search for examples of how others have made use of behavior-change tools, such as commitment, and review those examples via your browser. This feature makes it significantly easier to come up with ideas of how to apply social marketing to your own communications.
- A case studies database which contains 70-plus cases. Approximately five new cases are being added each week.

## Two statewide awards add Ecology's recycling spirit

Shelly McClure, *Ecology Waste Reduction and Recycling Specialist*

The state Department of Ecology's (Ecology) Solid Waste and Financial Assistance Program is working with the Washington State Recycling Association (WSRA) and other Ecology divisions to assure that waste reduction and recycling are recognized in existing award programs.

Upon evaluation of Ecology's current Waste Reduction and Recycling (WRR) Awards, it was determined that at least two other statewide awards have been honoring what is centrally important to the WRR awards: recognizing the efforts of facilities to reduce, reuse and recycle waste materials. Instead of having separate WRR Awards, which duplicate existing efforts, it will be more effective for Ecology's solid waste program to support the waste reduction and recycling aspects of these two other statewide awards.

This support will be given to an existing Ecology pollution-prevention award and the WSRA awards.

Ecology currently administers the Governor's Award for Pollution Prevention and Sustainable Practices. It is a well-established and competitive award honoring the achievements of businesses and government agencies that practice pollution prevention and use sustainable alternatives.

Further information about the Governor's pollution-prevention awards can be found at

[http://www.ecy.wa.gov/sustainability/Resources/go\\_v\\_awards.htm](http://www.ecy.wa.gov/sustainability/Resources/go_v_awards.htm). Applications will be available in April, with an early June deadline for turning them in. Recipients are awarded in September at a ceremony held at the Capitol Building.

The Washington State Recycling Association is currently soliciting nominations for its annual awards. The categories have been expanded, and include Individual Recycler of the Year, Business Recycler of the Year, Public Agency Recycler of the Year, Institutional Recycler of the Year, Most Innovative Program, the Marilyn Skerbeck Recycling Advocate Award, Hall of Fame and the Good Idea/Poor Execution Award. The deadline for all nominations (except the hall of Fame award) is March 22, 2002. Hall of Fame award nominations are due March 8, 2002. For more information, contact WSRA President Janet Nazy at 206-244-0311.

Because of this reevaluation and better use of Ecology resources, the annual Waste Reduction and Recycling Awards will not be presented at this year's Washington State Recycling Association banquet. What they represent and who they honor will be very adequately exemplified at the banquet by the expanded WSRA award categories, as well as by the Governor's Award for Pollution Prevention and Sustainable Practices later this year.

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## Notice of grant funding availability

For the third year, the Western Region of NAPCOR (the National Association for PET Container Resources) is making funding available for projects that increase the collection and recycling of PET (polyethylene terephthalate) plastic bottles. The full Request for Proposals can be viewed on the Web site, [www.napcor.com](http://www.napcor.com).

For the 2002 grant cycle, \$35,000 will be available to eligible contractors in the Western Region for projects that meet NAPCOR's objectives. These objectives include increasing the recycling of iPET (24-ounce and smaller) bottles from venues, special events, and collegiate or corporate campuses; increasing residential recycling of "custom" (non-soft drink) PET bottles and jars; and adding PET bottles to recycling programs that do not currently collect them.

NAPCOR funds can be used for recycling collection, processing or transportation equipment or expenses, educational programs and materials, or other related project expenses. Eligible

contractors are state and local governments, nonprofit organizations, and private businesses in partnership with governments and/or nonprofits. Projects demonstrating the potential of producing a quantifiable increase in PET bottle collection will have priority for funding. Organizations submitting proposals should make themselves familiar with NAPCOR's technical and communication resources and use them where feasible.

Proposals are due by March 15, 2002. Grant awards will be announced in May of 2002.

In 2001, nine Western Region projects were funded in amounts ranging from \$500 to \$7,000.

Descriptions of some of these projects, and also projects funded by NAPCOR's Central and Eastern Regions, can be found in NAPCOR's on-line newsletter, PET Projects. Current and archived issues may be found at [www.napcor.com](http://www.napcor.com). For more information, please contact Don Kneass, Western Region Director, at 206-219-1500 or [donkneass@napcor.com](mailto:donkneass@napcor.com).

## Training for pilot performance grants

*Steve Loftness, Ecology Grants Project Officer*

The Department of Ecology's (Ecology) Pilot Performance Grant Cycle for Coordinated Prevention Grant recipients begins in the spring of 2002. Ecology will request proposals for up to \$2 million for grants supporting sustainability: projects that reduce waste, prevent pollution, and conserve resources and energy.

Although grants are awarded only to local government solid waste planning authorities, partnerships between local solid waste programs and citizen groups, businesses or other government branches are encouraged. Requests for proposals will be distributed in February, and initial applications will be due in March.

To comply with recent changes in statute, these pilot grants use a different format and process than past grants did. To help with this transition,

Ecology will be providing training related to the operation of the upcoming Pilot Performance Grant Cycle for Coordinated Prevention Grant recipients. The training will outline the principles of Outcome Funding and how it relates to the preparation of proposals for the grant cycle, which will be due in March. Denise Klein of The Rensselaerville Institute is the training contractor.

The dates of the training are Monday, February 11, 9:30 a.m., at Ecology's Northwest Regional Office in Bellevue; Wednesday, February 13, 9:30 a.m., at Ecology HQ in Lacey; Monday, February 25, at Hal Holmes Center, 10 a.m., in Ellensburg; and Tuesday, February 26, 10 a.m., at Ecology's Eastern Regional Office in Spokane. Please call Steve Loftness at 360-407-6060 for addresses.

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# Pollution from vehicles is more than just hot air

*Jay Shepard, Ecology's Sustainability Specialist*

Washingtonians drove their vehicles over 54 billion miles in 2001. That's 2,183,324 times around the Earth, or 113,813 trips to the moon and back, or a couple of round trips to New York City for every one of our state's 5,050,756 cars.

From all our cars and driving, we estimate that in one year we generated 2,010,924,139 pounds of vehicle-related solid waste. That's 341.2 pounds per person in the state from routine maintenance, repair and end-of-life disposal.

That's the solid waste. So, how else do motor vehicles impact the environment besides air pollution, you might ask? Consider these:

- "Non-point water pollution" from storm water run off.
- Land development involving impervious surfaces. The majority of impervious surfaces are created to accommodate cars, i.e., roads, parking lots, and garages. These hardened surfaces result in excess storm water, potential flooding and pollutant concentration.
- Washing our vehicles once per month (some wash weekly, some wash annually), in Washington we use about 2,121,317,520 gallons of potable water per year. That's enough water for 80,000 people for one year.

Now, the hot air. Approximately 2,907,486,301 gallons of fuel were used to travel those 54 billion miles, resulting in 51,387,388,424 pounds of air pollution released into our air and lungs, or 9,229 pounds per person.

Now consider this. The total cost of owning and operating a motor vehicle is about \$6,295 per year. Some more, some less. On the average Washingtonians spend about 370 hours per year working to own and operate a motor vehicle. That's

over 4% of your life in one year. And, we spend about 530 hours of our life per year, or 6% of our life annually, IN the car driving it or most likely waiting at a stop with the engine idling.

What's the alternative? For now, drive your car only when necessary. Keep it tuned up and in good condition. Make it last.

When you buy a new car, consider a low-emission vehicle, super-low-emission vehicle or an ultra-super-low-emission vehicle. In the not-too-distant future there will be vehicles that operate on alternative fuels and extremely energy-efficient personal transportation devices for the urban environment.

Interested in more? To read the complete article, go to <http://www.ecy.wa.gov/biblio/0207007.html>.

**For environmental car care tips, go to**

[http://www.asecert.org/subchannels/media\\_press\\_031501\\_environment.cfm](http://www.asecert.org/subchannels/media_press_031501_environment.cfm)

**Before you buy, take a look at the greenest and meanest vehicles of 2001.** Go to the American Council for an Energy-Efficient Economy (ACEEE) Green Cars Web page:

<http://www.greenercars.org/bestof.html>

**Want to know what your car's environmental performance is?** Look it up here:

<http://www.fueleconomy.gov/feg/findacar.htm>.

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<sup>1</sup> Authors estimate based on historical trends reflected in the Washington State Data Book, Road Usage and Safety, Washington State Office of Financial Management.

# Waste-to-Resource

## Tree-free particleboard

*A regular column by Jay Shepard, Ecology Sustainability Specialist*

PacificBoard™, a particleboard that contains no forest products, is now being manufactured in Idaho. Pacific Northwest Fibers, located just east of the Washington-Idaho border in Plummer, makes this new product from straw. The company is owned equally by Seeds, Inc., Tekoa, Washington, and the Coeur d'Alene Tribe, Worley, Idaho. Seeds,



**Crop residue**

Inc. processes and markets Kentucky bluegrass seed for Inland Pacific Northwest producers.

Straw, the crop residue remaining after seed and grain harvesting, has

traditionally been burned, as the preferred method of disposal. Due to human health and environmental impacts, grass burning has been banned in the state. This left growers with the problem of finding an alternative disposal method.

Rather than continuing to see this material stream as a waste, the growers elected to see it as a resource. In cooperation with the Coeur d'Alene tribe, they chose to manufacture a new particleboard made from the annually renewable resource.

PacificBoard™ is the brand name of Pacific Northwest Fiber's resulting product.

The straw is shredded then bound together with a material known as MDI.



**Shredded straw prepared for manufacturing**

Diphenylmethane diisocyanate (MDI) is the generic name of a product used in industrial settings. The exact composition of MDI varies with the manufacturer and is most often proprietary. The primary use of

MDI has been to manufacture rigid polyurethane foam.

The plant in Plummer has a maximum capacity of 22 to 24 thousand tons per year. The cost of harvesting and shipping is approximately \$35 to \$45 a ton. The straw comes from within 50 miles of the plant; any further and it would be cost prohibitive. With the rich grass and wheat production of the Palouse, there is ample supply.

The facility can produce eight sheets every four minutes.

They can produce 20 to 25 boards

from each straw bale. It takes 90 to 100 pounds of straw per three-quarter-inch board. About 16 inches of loose straw shred is compressed into four- by eight-foot sheets of particleboard three-quarters of an inch thick.

While the product is slightly more expensive than particleboard, its strength and performance are superior. Unlike wood particleboard, PacificBoard™ is water repellant and contains no formaldehyde. This new product can be used in all applications that wood-based particleboard can be used for, such as floor underlayment, furniture, shelving, cabinets, countertops and more.



**Finish sanding & quality check**

**For more information on PacificBoard™**, go to Pacific Northwest Fiber's Web site: <http://www.pacificfiber.com/>. The Material Safety Data Sheet (MSDS) is accessible on the Web site.

**For more information about MDI**, go to <http://www.chemexpo.com/news/PROFILE000103.cfm>.

**For information about the health and environmental impacts of MDI**, go to the World Health Organization Web site: [http://www.who.int/pcs/cicad/summaries/cicad\\_27.html](http://www.who.int/pcs/cicad/summaries/cicad_27.html).

**Built-e, the online store of the Environmental Home Center**

<http://www.built-e.com/shop.mv>

**Wholesale only:**

Continental Hardwood, Kent, WA, 253-872-8100

## **Read this newsletter online!**

*The Closed-Loop Scoop* newsletter should not create waste. If you would like to receive a copy of the newsletter via e-mail please send a message to [jbil461@ecy.wa.gov](mailto:jbil461@ecy.wa.gov) with the subject line reading "Subscribe Closed-Loop Scoop." To make changes to our mailing list, please contact Jim Bill at 360-407-6125.

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